

Creating Healthy Indoor Air for America's Children



Susan Titus

U.S. Environmental Protection Agency

***Tools for Schools* Program**



Is IAQ a New Issue?

“In the construction of buildings, whether for public purpose or as dwellings, care should be taken to provide good ventilation and plenty of sunlight...schoolrooms are often faulty in this respect. Neglect of proper ventilation is responsible for much of the drowsiness and dullness that...make the teachers work toilsome and ineffective.”



Poor IAQ is Expensive

- Health Problems
- Student and Teacher Performance
- Loss of Public Trust
- Liability Issues
- Negative Media Coverage
- Accountability to School Board and Other Officials

Teachers at Arlington School Link Ailments to Renovations

Poor Ventilation May Be Contributing to Problems, Officials Say

By Stephanie Gilfillan
Washington Post Staff Writer

More than two dozen teachers at Arlington's Kenmore Middle School are blaming renovations that began 18 months ago at the 1950s-vintage school for a variety of physical problems they have suffered, including fatigue, rashes and miscarriages.

At a meeting Friday with county school officials, the teachers said a half-dozen of their colleagues at the school had suffered miscarriages since the start of the construction project, which has replaced ceiling windows and flooring in many rooms.

"I have been totally sick this year," said Barbara Mayo, 26, who has been sick from hair loss, eye pain,

miscarriages among school staff members since work began, but he doubted ventilation problems have caused them.

The renovations at Kenmore are part of a six-year, \$75 million project that will touch nearly every county school before the year 2000.

School officials say some of the problems are caused by dust and debris from the construction work.

that new testing for airborne chemicals is under way. School officials would review those results.

A person who comes to work at the school is able to work in conditions that are satisfactory, Cobb said.

Montco police officers are also investigating the problem.

Philadelphia Inquirer

Monday, May 13, 1996

In area schools, many long for a breath of fresh air

More are getting sick, parents say. Administrators share the frustration. For several incidents, federal standards do not exist.

By Ann Devine
The school nurse called this school a "sick school." She was talking about the health problems of the school's students and staff. At the school, 10,000 students and 1,000 staff members are getting sick. The school nurse said that the school is a "sick school" because of the health problems of the students and staff.

Doctors are getting sick, parents say. Administrators share the frustration. For several incidents, federal standards do not exist.

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Mouse dies from air in classroom

Duxbury school tested

By Sam Klein
The Patriot Ledger

DUXBURY — A laboratory mouse died and others were paralyzed after breathing a sample of air from a fifth-grade classroom at the Chandler Elementary School, school officials were told last night.

Complaints pour in about bad school air

There has not been one case of the disease in the state since it was first reported in 1994. The disease is called Sudden Cardiac Death Syndrome (SCDS).

'witches' brew' of toxins



Schools Have Unique Problems

- **Tight Budgets**
- **Old Buildings/Deferred Maintenance**
- **Densely Populated Space**
- **Special Sources of Pollution**
- **Inventive Space Utilization**
- **Portables**



Schools *Can* Improve Their Indoor Environments!

- Most schools have IAQ-related problems
- Many IAQ problems are easily identified and resolved by school staff
- It costs less to prevent IAQ problems than to fix them
- Being proactive is **KEY!**





***IAQ Tfs* is One Way Schools Are Improving Indoor Environments**

- ***IAQ Tfs* is a successful program used in more than 20,000 schools nationwide.**
- **EPA wants to make *IAQ Tfs* available to, and successful for, every school in America.**
- **EPA has developed and designed many tools and resources to make your job easier.**



Key Features of the *IAQ Tools for Schools Kit*

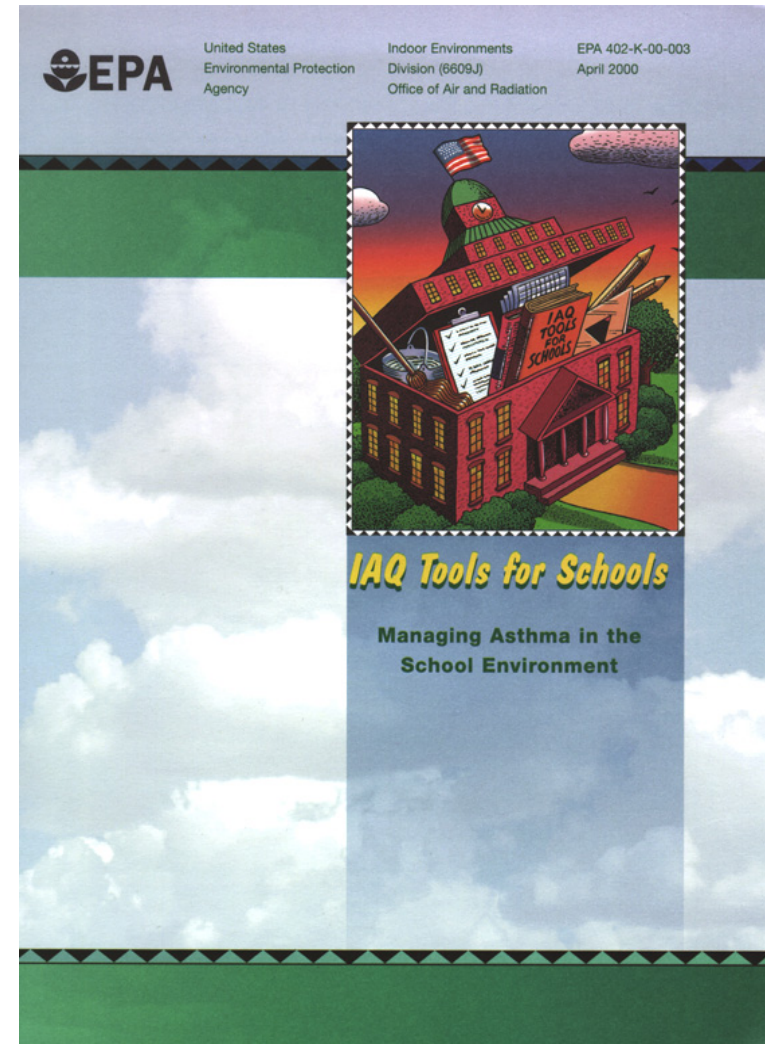
- Voluntary and flexible
- Checklists and building walk throughs for whole building
- HVAC video
- Coordinator's Guide
- Communication Guide
- EPA provides recognition





Managing Asthma in the School Environment

- **1 in 13 Children Suffers From Asthma**
- **1 in 5 Americans Spends His/Her Day in a School Building**
- **An Estimated 8,000-26,000 New Asthma Cases Arise in Children Per Year**
- **Asthma Accounts for One-Third of All Pediatric Emergency Room Visits**





A Cluttered Classroom...





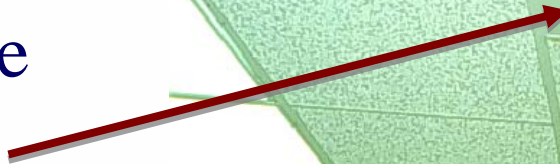
Mmmmm...





Blocked Return

For air to come
out of *here*



It has to get in *there*





This filter had
never been changed!





Uhh ...
how do we
get in *there*?

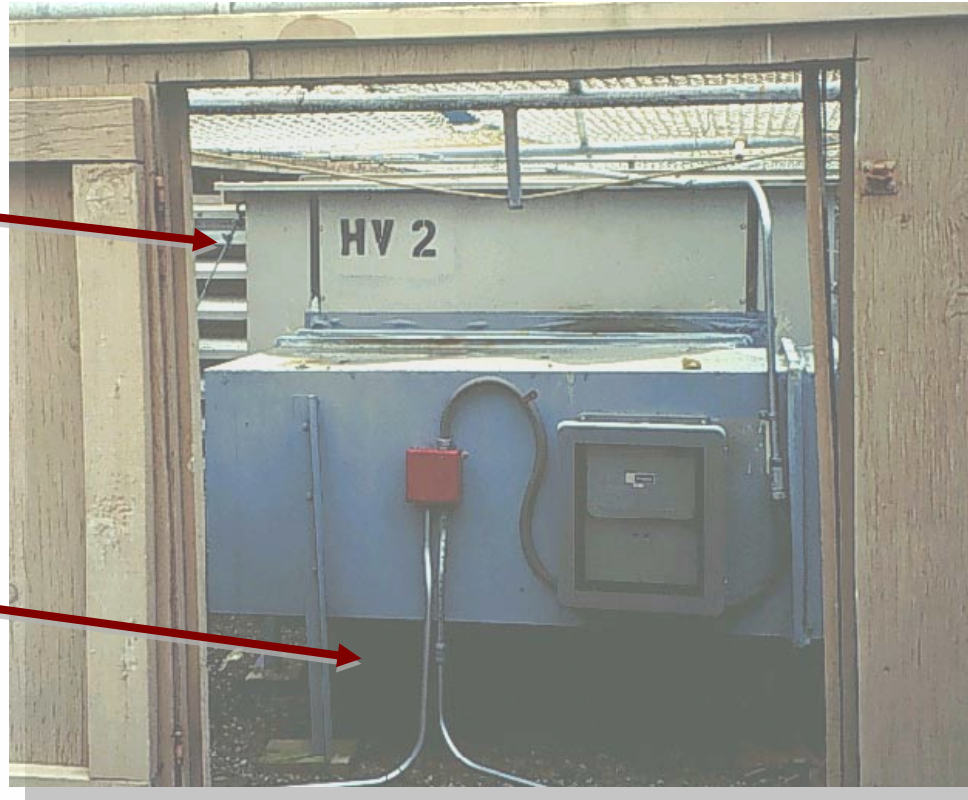




How did that smell get back in here?

*Outside
air intake*

*Bathroom
exhaust*





IAQ Team Members

Teachers



Administrative Staff

Health Officers



Facilities Operators



School Boards



**Students, Parents,
Community**



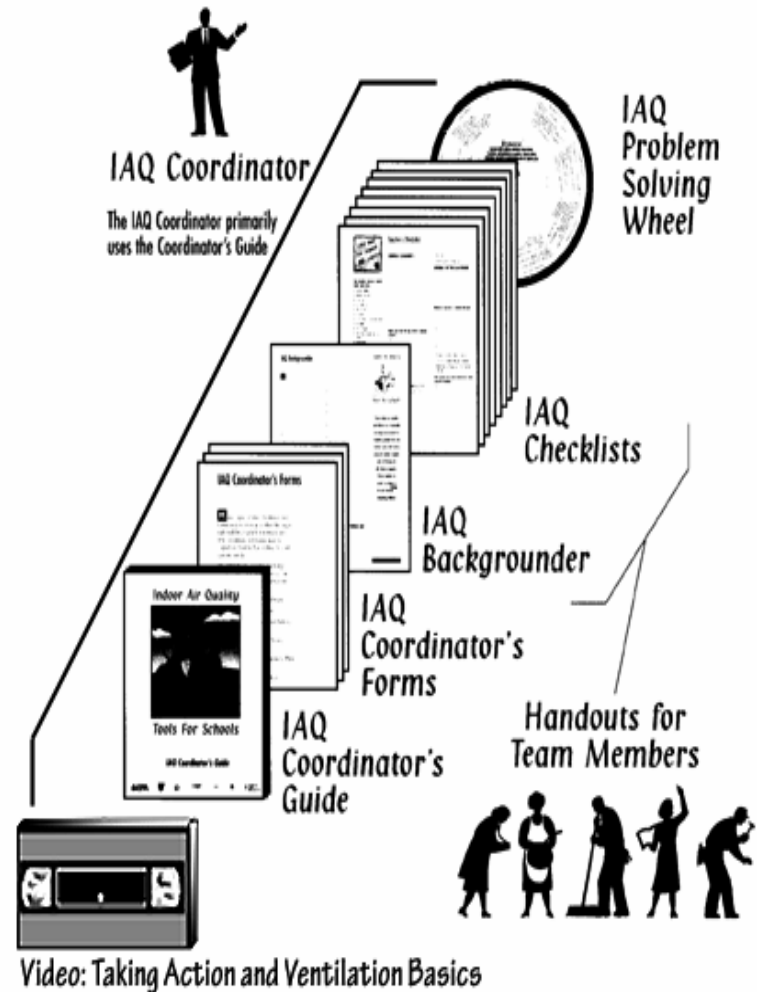
EPA's Indoor Air Quality Tools for Schools Program...

- **On-Site activities in the school building**
 - Custodial
 - Occupant Activities
 - Policies
 - Emergency plan in case of IAQ crisis
- **School District Activities**
 - Maintenance
 - Renovation
- **Communication**
 - Internal within School District
 - External with Community and Parents
 - Media



Role of IAQ Coordinator

- Disseminates IAQ Information
- Creates and Coordinates IAQ Team and Activities
- Implements IAQ Management Plan
- Communicates to All Constituents
- Facilitates Resolution of IAQ Problems





***IAQ TfS*WEB Resources**

- Grant opportunities in Region 10
zhen.davis@epa.gov
- Case Studies of Successful TfS Programs
<http://www.epa.gov/iaq/schools/iaqtfsawards>
- *IAQ Design Tools for Schools* Web Site
<http://www.epa.gov/iaq/schooldesign/>
- Healthy Schools Web Portal
<http://cfpub.epa.gov/schools/index.cfm>
- Technical Tools:
 - Mold Remediation Document
<http://www.epa.gov/mold/>
 - I-Beam Software
 - http://www.epa.gov/iaq/largebldgs/ibeam_page.htm



IAQ Tfs Awards Program

WHAT AWARDS ARE OFFERED?

- ***IAQ Tfs Great Start Award*** -
For schools that committed to implementing *IAQ Tfs*
- ***IAQ Tfs Leadership Award*** –
For schools that implemented the *IAQ Tfs* Kit and developed an IAQ management plan
- ***IAQ Tfs Excellence Award*** –
For schools that demonstrated outstanding achievement in implementation of the *IAQ Tfs Kit* and in their communications and outreach efforts

HOW TO APPLY:

Contact Jennifer Lemon, U.S. EPA at (202)343-9608 to obtain criteria information, and applications



7th Annual *IAQ Tools for Schools* National Symposium

WHO: Over 500 School Board Officials, Administrators, School Nurses, Teachers, Facility Managers, School and Health Association Members, parents and others from around the U.S. and abroad.

WHAT: Training opportunity sponsored by EPA with national experts discussing hot issues, such as new school construction & renovation, asthma, mold remediation, student performance, etc.

WHY: Offer participants the opportunity to learn about school IAQ issues while networking with national IAQ experts and others; present the National *IAQ TFS* Excellence Award to schools with exemplary IAQ management programs.



How To Register for Symposium

- The Symposium will take place on December 7-9, 2006 at the Grand Hyatt Hotel in Washington, DC.
- Visit the Web site www.iagsymposium.com to register or for additional information.
- Registration fee is \$310/person.



Additional Resources

- **IAQ INFO Hotline (To Order A Kit):** **1-800-438-4318**

- **EPA Pacific Northwest Office:** **Susan Titus**
 1200 Sixth Ave., 10th Floor
 AWT-107
 Seattle, WA 98101
 (206) 553-1189
 titus.susan@epa.gov

- **Workshops & Walkthroughs** **Rich Prill**
 WSU Energy Program
 Spokane, WA
 (509) 477-6701
 prillr@energy.wsu.edu

- **IAQ Web Site:** www.epa.gov/iaq/schools



Join the IAQ
Tools for Schools
Air Toxics Project

Help Improve the
Indoor Air Quality
in Your School